United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number ST01697SE

This Certificate issued to The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

certifies that the change in the type design for the following product with the limitations and conditions therfor as specified hereon meets the airworthiness requirements of Part 25 *of the Federal Aviation Regulations.*

Original Product Type Certificate Number: A16WE
Make: The Boeing Company
Model: 737-700, 737-800, 737-900 ER Series

Description of Type Design Change:
Cabin altitude reversion to 6,500 feet in lieu of 8,000 feet at 41,000 feet flight altitude (Lower Cabin Altitude modification) in accordance with Figure 1 of Boeing Report D926A200, Revision N, dated May 23, 2009, or later Federal Aviation Administration (FAA) approved revision.

Limitations and Conditions: Approval of this change in type design applies to eligible serial numbers as identified in Figure 1 of Boeing Report D926A200, Revision N, dated May 23, 2009, or later FAA approved revision. This installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of that aircraft. A copy of this certificate and Figure 1 of Boeing Report D926A200, Revision N, dated May 23, 2009, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

(See continuation pages 3 through 5 for additional Limitations and Conditions)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: March 23, 2004

Date of issuance: December 8, 2006

Date reissued:

Date amended: May 31, 2007, June 22, 2007, August 8, 2007, December 5, 2007, October 26, 2009

By direction of the Administrator

(*Signature*)

for

Manager, Seattle Aircraft Certification Office

(*Title*)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2(10-68)

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Limitations and Conditions (continued)

Certification Basis

For 737-700 and 737-800 Series airplanes: The certification basis for this type design change is the same as the certification basis for 737-600/700/800 airplanes incorporated by reference in Section VII of Type Certificate Data Sheet (TCDS) A16WE plus the following:

SECTION NO.	TITLE	AT AMDT. 25-
25.571	Damage-tolerance and fatigue evaluation of structure.	86 *

* Applicable to structure that was significantly modified for the 737-700/800 series airplane as Identified in Boeing document D010A001, approved by the FAA and JAA and referenced on the TCDS. Section 25.571 Amendment 25-54 is to be applied to other, un-significantly modified structure.

For 737-900ER Series airplanes: The certification basis for this type design change is the same as the certification basis for 737-900ER airplanes incorporated by reference in Section X of Type Certificate Data Sheet (TCDS) A16WE.

Eligible Serial Numbers (S/N)
Airplanes which have incorporated this modification are cited in Figure 1 of Boeing Report D926A200, Revision N, dated May 23, 2009, or later FAA approved revision.

737-900ER airplanes are not eligible for this modification unless Boeing Service Bulletin 737-53-1300 has been installed.

737-900ER serial number 35680 is not eligible for installation of this Lower Cabin Altitude (LCA) installation.

Flight Operations
Airplanes modified in accordance with this supplemental type certificate (STC) must be operated in accordance with the Boeing 737 Airplane Flight Manual, Document D631A001, dated November 23, 2004, or later FAA-approved revision.

Instructions for Continued Airworthiness
Airplanes modified in accordance with this STC must be maintained in accordance with the following documents:

For 737-700/-800 Series airplanes: Boeing 737 Maintenance Planning Data (MPD), Document D626A001-CMR, Section 9, Revision November 2006 R1, or later FAA-approved revision. See Note 1.

For 737-900ER Series airplanes: Boeing 737 Maintenance Planning Data (MPD), Document D626A001-CMR, Section 9, Revision September 2009, or later FAA-approved revision. See Note 1.

Boeing Aircraft Maintenance Manual, Document D633A101-BBJ, dated June 10, 2004, or later FAA accepted revision.

Limitations and Conditions (continued)

Boeing 737-700IGW (BBJ) Structural Repair Manual, dated July 10, 2004, or later FAA-approved revision.

Boeing 737-800 (BBJ2) Structural Repair Manual, dated November 10, 2004, or later FAA-approved revision.

Repairs, Alterations, and Modifications (RAM)

Prior to installation of the STC, a survey of each airplane, and the airplane records, is required to identify all existing RAMs (including STCs) affected by cabin pressure. A substantiation report must be provided to ensure each existing RAM is substantiated for the increased cabin pressure differential. The substantiation report must identify all necessary adjustments to RAM designs and associated instructions for continued airworthiness.

All existing STCs affected by the increased cabin pressure differential must be revised to reflect the appropriate thresholds and inspection intervals for each existing RAM operated at higher cabin pressure differentials.

It is the operators responsibility to insure that all future RAMs affecting the pressure vessel are substantiated and approved for the increased cabin pressure differentials.

Boeing Service Bulletins with Compliance Times Affected by Lower Cabin Altitude Modification

For airplanes modified in accordance with this STC, the flight cycle related compliance times are different from those specified in the service bulletins listed below. All initial compliance times (thresholds) specified in flight cycles must be reduced to 1/2 of those specified in the service bulletin except as noted in the tables below. All repeat interval compliance times specified in flight cycles must be reduced to 1/4 of those specified in the service bulletin except as noted in the tables below. For Airworthiness Directive (AD) mandated service bulletins, all other requirements of the applicable ADs remain in effect.

AD Mandated Service Bulletins:

Service Bulletin Number	Title	Exceptions
737-53A1222 (AD 2007-06-09 supersedes AD 2005-25-03)	Fuselage – Section 41 CAB – Point Splice Fitting Replacement	
737-53-1236 (AD 2006-16-11)	Fuselage – Airstair Doorstop Intercostal – Inspection and Fastener Replacement	
737-53A1248 (AD 2005-21-06)	Fuselage – Body Station 1016 Aft Pressure Bulkhead – Inspection for web Cracks at the Y-Chord	For the inspection area below Stringer 15, the HFEC and LFEC repeat inspection intervals are unchanged

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Limitations and Conditions (continued)

Service Bulletin Number	Title	Exceptions
737-53-1251 (AD 2005-05-18)	Fuselage – Frames and Bulkheads – Body Station 1016 Aft Pressure Bulkhead	The repeat inspection interval is unchanged

Service Bulletins that have not been AD Mandated:

Service Bulletin Number	Title	Exceptions
737-52-1140	Door – Forward entry – Upper Aft Corner Door Stop Replacement	
737-53-1217	Fuselage – Section 43 and Section 47 – Stringer 17 Skin Cracks at Station 364-371 and Station 890-900	
737-53-1243	Fuselage – Automatic Overwing Exit Doublers (Bearstraps) – Inspection Interval Change	For PSE's 53-40-22-3 and 53-40-22-22, the inspection intervals are unchanged
737-53-1250	Fuselage – Water Service Panel – Support Stiffener Replacement	

Required Modifications Due to Previously Installed Modifications and Supplemental Inspection Requirements:

Boeing Document D952A005, "Boeing 737 Airplanes with Lower Cabin Altitude Modification, Required Modifications Due to Previously Installed Modifications and Supplemental Inspection Requirements", lists the additional required modifications and Supplemental Inspection Requirements due to previously installed modifications. The required revision level of this document for each eligible serial number airplane is listed in Figure 1 of Boeing Document D926A2090, Revision N, dated May 23, 2009, or later FAA approved revision. All other required inspections remain in effect.

Notes

Note 1: Boeing 737 MPD D626A001-CMR, Section 9 contains the Airworthiness Limitations which is FAA-approved and specifies maintenance required under § 43.16 and § 91.403 of the Federal Aviation Regulations. This section contains Supplemental Structural Inspections and mandatory Certification Maintenance Requirements (CMR), which are FAA-approved and must be complied with at the intervals specified. The CMRs and their intervals must not be deleted or escalated without the approval from the Manager, Seattle Aircraft Certification Office.

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